

EXHIBIT A

Project No. MtbTITLE M. tuberculosis 180 region T₇ primerBook No. 7420

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From Page No. =	in 42°C / 109 μ glycerol / 109.0 MSA / 55 μ mtb rRNA		
Materials =			
1/5 dithio 2.3 μ /15pmol	T ₇ A mth B (-) 290-3' R.P. 2148-69	8400/me	0.8 μ l / 15pmol
	Mth (+) 237	2082-79	3.200/me, 1.2 μ l / 15pmol
	9x GP / mth	2120-98	RT / 73350, 12000/xxn
	10x RNP	2120-96	T ₇ m 10303, 4000/xxn
	10mm dATP	2090-87	500mm TMAc 2120-95
	Nalc - SOB	2120-97	(tetra methyl ammonium salt)
New primer	T ₇ A mth A (-) 246	1802-71	1.99 μ l/me, 55mer, 3.7 μ l/me, 4.1 μ l
	T ₇ A mth A (-) 247	1802-73	1.59 μ l/me, 47mer, 3.42 μ l/me, 4.4 μ l
1/5 dithio 2.3 μ /15pmol	T ₇ A mth A (-) 251	2057-93	12.12 μ l/me, 55mer, 23.7 μ l/me, 0.63 μ l
1/5 dithio 2.3 μ /15pmol	MgoA (+) 146	2082-62	11.00 μ l/me 31mer, 33.5 μ l/me, 0.45 μ l
(I) Design	Primer set		
	T ₇ A mth B (-) 290-3' R.P. / 237 / 15 μ l = (1) - (2)	55 μ g / 10 μ l	4.8 μ l
	(1/5) \rightarrow 4 μ l		
1/5 (2.3 μ) MgoA (+) 146 / T ₇ A mth B (-) 246 / 4 μ l	(1) - (2)		3.6 μ l
	T ₇ A mth A (-) 247 / 4 μ l	(3) - (18)	3.3 μ l
	T ₇ A mth A (-) 251 / 3.5 μ l	(19) - (24)	4.5 μ l
	T ₇ A mth A (-) 251 / 3.2 μ l	(25), (26)	0.6 μ l / 10 μ l (0.2% BSA) 4.5 μ l
(II) Mix	ix	280 μ l	(IV) HPA =
9x GP / mth	11	308	hybridized probe mth B (-) 237
10x RNP	10	280	(1/5) HPA and HPA
10mm dATP	10	280	probe mth A (+) 190 R.P. (76) 3x10 μ l
glycerol	10	280	helper mth A (+) 175 1.79 μ l/me
DMSO	10	280	helper mth A (+) 219 1.3500 μ l
500mm TMAc	2	56	
0.5% phenol	0.5	14	aligner 0.65 μ l x 26
red H ₂ O	13	364 μ l	
(III) mth rRNA from Liz a) 10 μ l rRNA (from L/N 11445)			
1) 2 μ l + 998 μ l H ₂ O (20 μ mol/ μ l) \rightarrow stored -70°C			problem x (x30)
2) 2 μ l + 998 μ l H ₂ O			total 90 μ l x 30 = 2700 μ l
3) 6 μ l + 994 μ l 0.2% BSA \rightarrow 55 μ g / 10 μ l			1) Hyb Rgt 2 (15mM dithiothreitol)
(IV) Enzyme mix (x28)			2) 1/10 50 μ l x 30 1500 μ l
RT 1.5 μ l x 28 = 42 μ l			3) probe 50 μ l x 30 1500 μ l
T ₇ 2 μ l x 28 = 56 μ l			4) helper + 175 25 μ l x 30 750 μ l
Nalc - SOB 10 μ l x 28 = 280 μ l			5) helper + 219 25 μ l x 30 750 μ l
			6) H ₂ O 0.65 μ l x 30 195 μ l

Witnessed & Understood by me,

Date

Invented by

Date

Recorded by

y. yang

Result:

LEADER 1 *5-5* SER. # 1111

RAW DATA SERIES MEASUREMENTS

V. 3.5

MEAS. TIME(s): 2.8 MtbAC(190

SAMPLE 1 RLU 97982 *x10-9.8K10 total counts*MEAS. TIME(s): 2.8 *T7A mtd(247-392)*

SAMPLE	RLU	<i>242°C/102 g/Ly/115000</i>
1	469196	<i>242°C/102 g/Ly/115000</i>
2	42265	<i>242°C/102 g/Ly/115000</i>
3	1597326	<i>242°C/102 g/Ly/115000</i>
4	45053	<i>242°C/102 g/Ly/115000</i>
5	45675	<i>242°C/102 g/Ly/115000</i>
6	1443728	<i>242°C/102 g/Ly/115000</i>

MEAS. TIME(s): 2.8 *42°C x 1 hr 20"*

SAMPLE	RLU	<i>OF 9</i>
1	2155	<i>OF 9</i>
2	2173	<i>T7A mtd(247-392)</i>
3	439601	<i>549</i>
4	448555	<i>T7A mtd(247-392)</i>
5	427898	<i>T7A mtd(247-392)</i>
6	431835	<i>242</i>
7	437224	<i>242</i>
8	425262	<i>242</i>
9	437259	<i>242</i>
10	418198	<i>T7A mtd(247-392)</i>
11	421466	<i>T7A mtd(247-392)</i>
12	424898	<i>T7A mtd(247-392)</i>
13	401789	<i>T7A mtd(247-392)</i>
14	419483	<i>T7A mtd(247-392)</i>
15	439176	<i>T7A mtd(247-392)</i>
16	433466	<i>T7A mtd(247-392)</i>
17	441665	<i>T7A mtd(247-392)</i>
18	427486	<i>T7A mtd(247-392)</i>
19	432622	<i>T7A mtd(247-392)</i>
20	429669	<i>T7A mtd(247-392)</i>

T7A-246, T7A-247 & T7A mtd(247-392)
looks very good.